ABSTRACT

SYNTHESIS 5-METHYL-2-(BENZOYLOXY)BENZOIC ACID AND ANALGESIC ACTIVITY TEST IN MICE (*Mus musculus*)

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5-Methyl-2-(benzoyloxy)benzoic acid is a salicylic acid derivative compound that have been synthesized by reacting of 5-methylsalicylic acid with benzoyl chloride by Schotten-Baumann method using tetrahydrofuran as solvent and pyridine as catalyst. Synthesis results was then recrystallized using methanol : water (1:1). The product yield 38% in the form are crystal solid needle-shaped and white, soluble in ethanol and acetone, but insoluble in cold water. Compound purity is evidence by melting point and Thin Layer Chromatography (TLC). Identification of the compounds structure were analyzed by ultraviolet spectrophotometer, infrared spectrophotometer (IR) and proton nuclear magnetic resonance spectrometer (^{1}H-NMR). The result of structural analysis indicate that the compound is 5-methyl-2-(benzoyloxy)benzoic acid. Analgesic activity test was performed in mice use writhing test method to determine the amount of stretching in mice. Doses of the test compounds and reference compounds (acetosal) used were 25 mg/kgBW, 50 mg/kgBW, and 100 mg/kgBW and pain inducer use 0.6% acetic acid solution. ED_{50} acetosal compound is 80.35 mg/kgBW, while the ED_{50} 5-methyl-2-(benzoyloxy)benzoic acid is 52.36 mg/kgBW. It can be concluded that the 5-methyl-2-(benzoyloxy)benzoic acid active as an analgesic and have a greater analgesic activity than acetosal.

Keyword : analgesic activity, synthesis, *Schotten-Baumann*, 5-methyl-2-(benzoyloxy)benzoic acid, w*rithing test*, ED_{50}.